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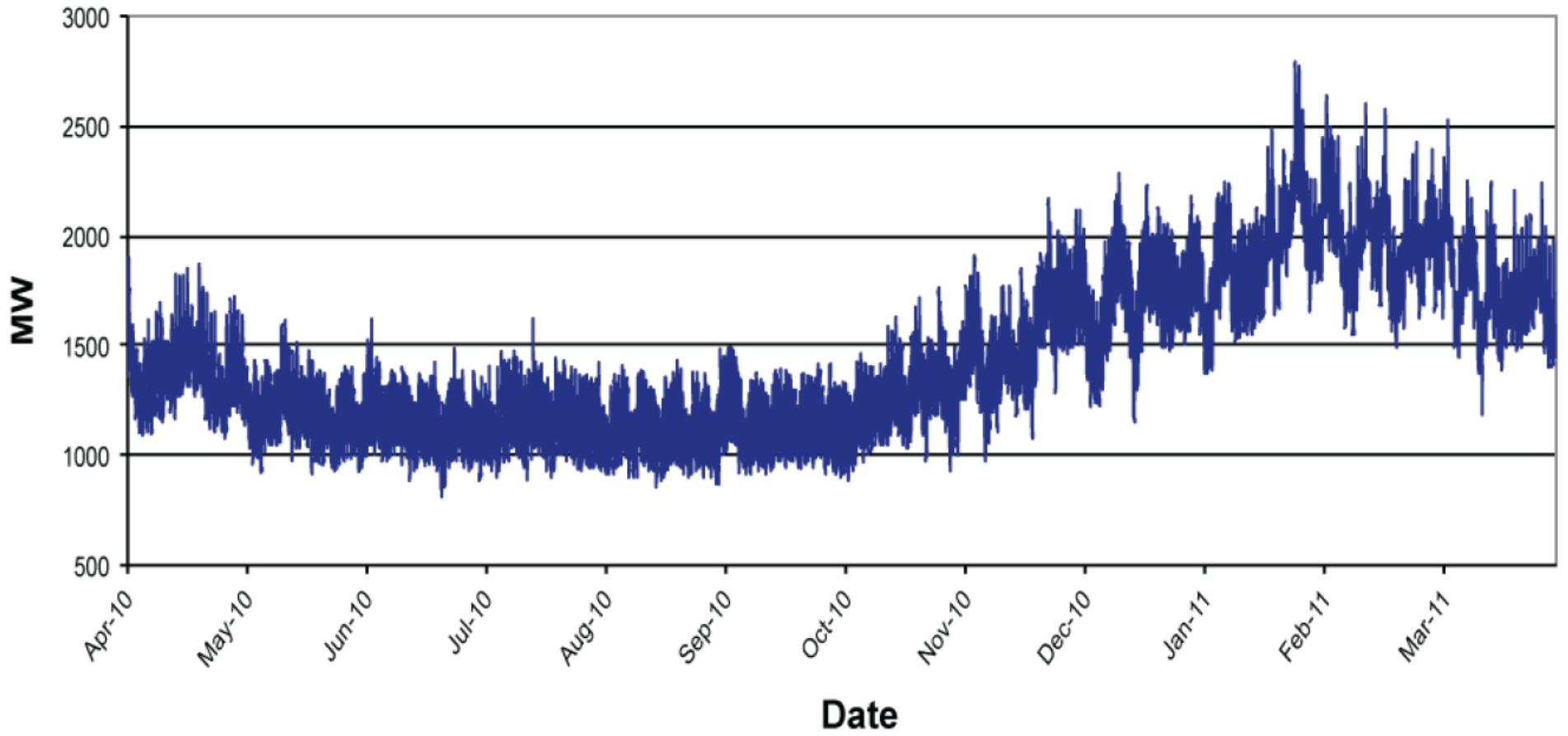
New Brunswick Hourly System Load

Figure 3: 2009/10 Hourly System Load



Typical Winter and Summer Day

Colson Cove

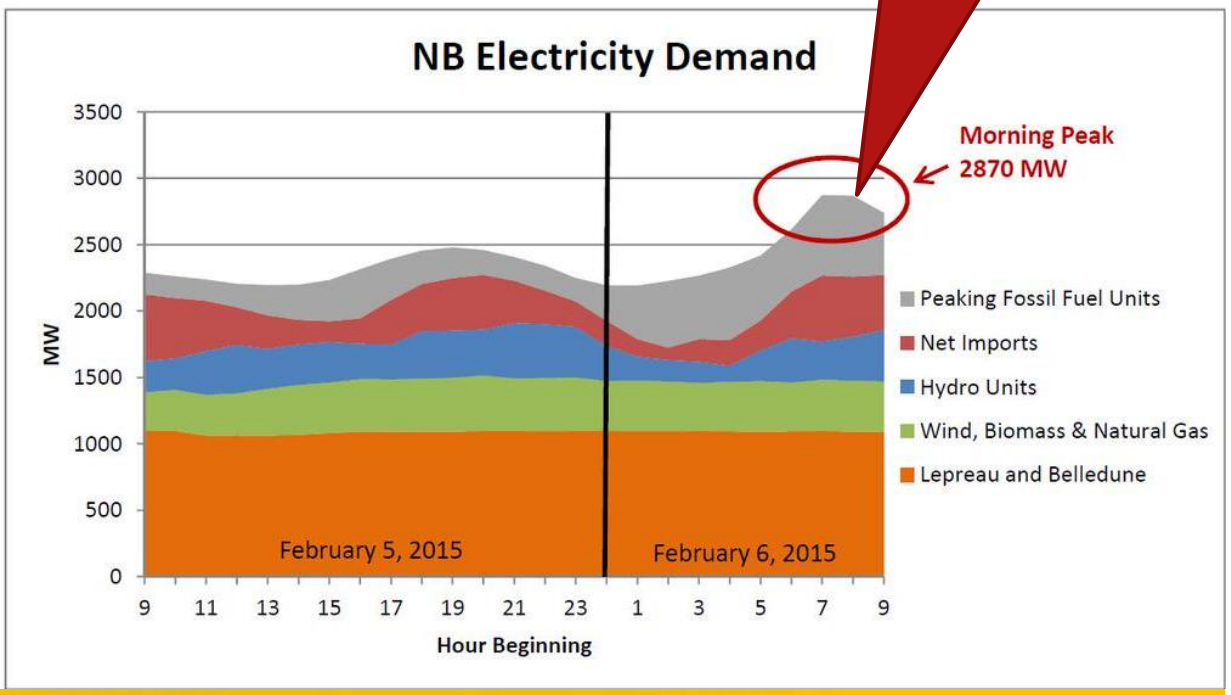
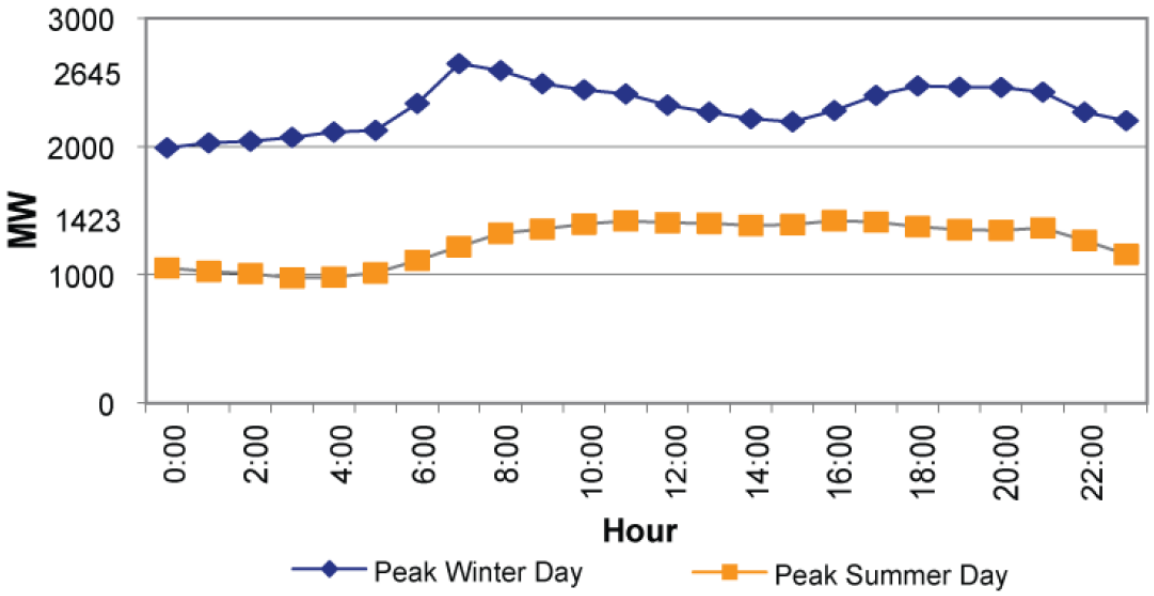
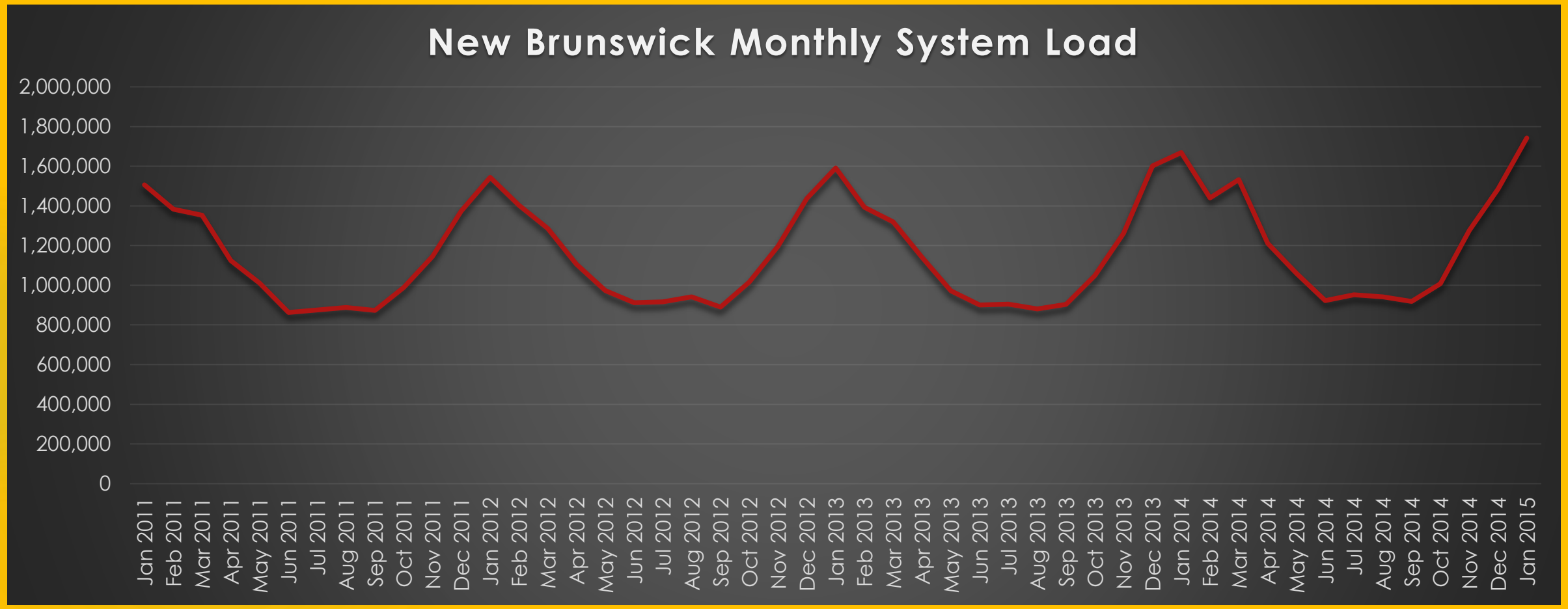


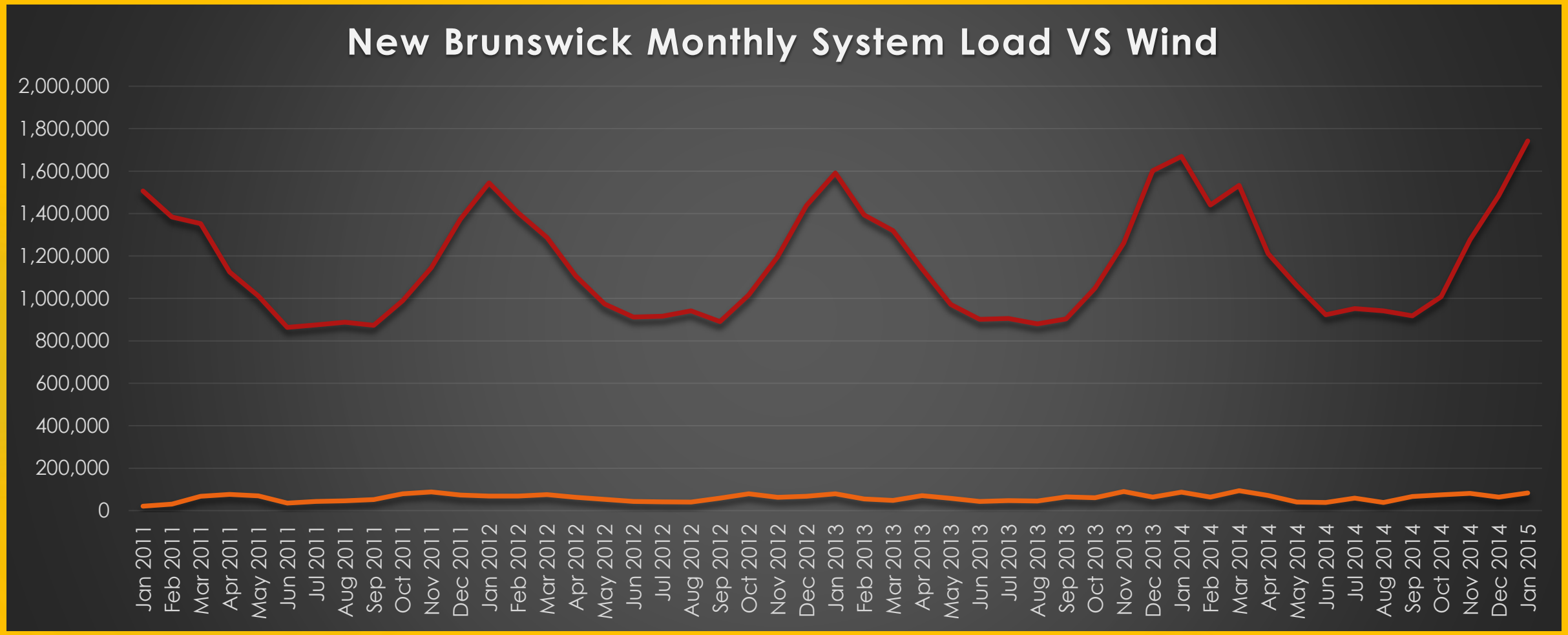
Figure 5: Total Load Requirements



New Brunswick Monthly System Load

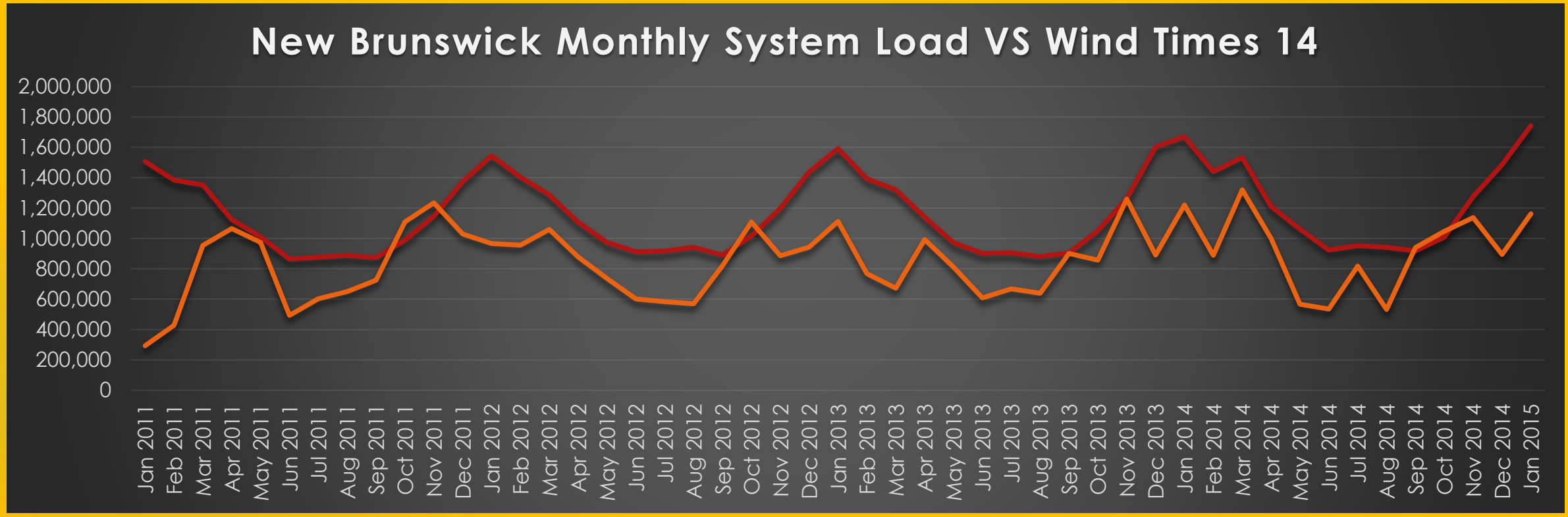


New Brunswick Wind Generation



New Brunswick Wind Multiplied by 14

Naturally Fits our Usage



Multiplication of 14 is only used to show seasonal patterns

Germany Summer and Winter

Electricity production in Germany in week 05 2015

usage tips

date selection

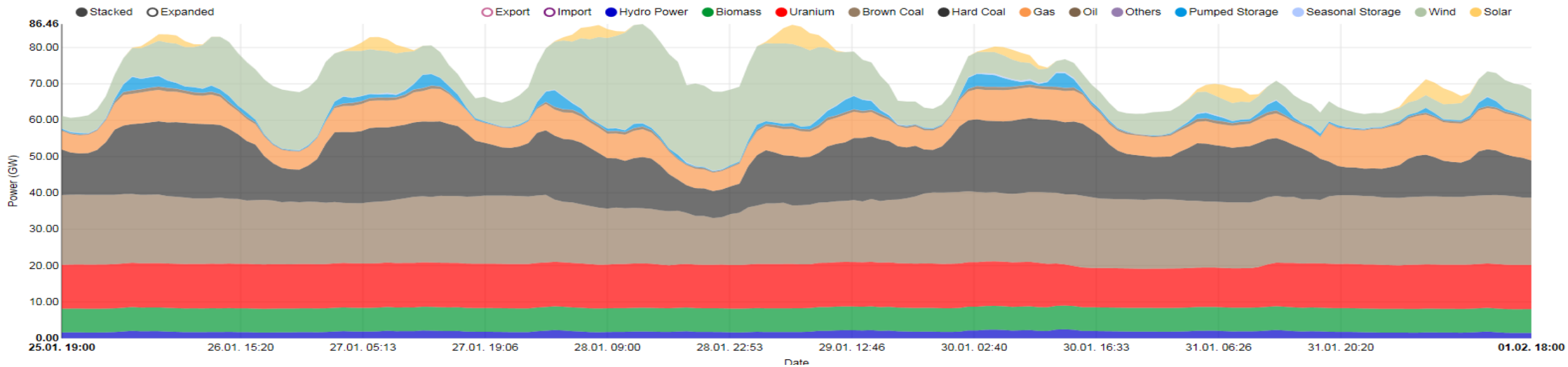
year: 2015

month:

week: 5

conv. >100MW
all sources
solar + wind

print



Electricity production in Germany in week 26 2014

usage tips

date selection

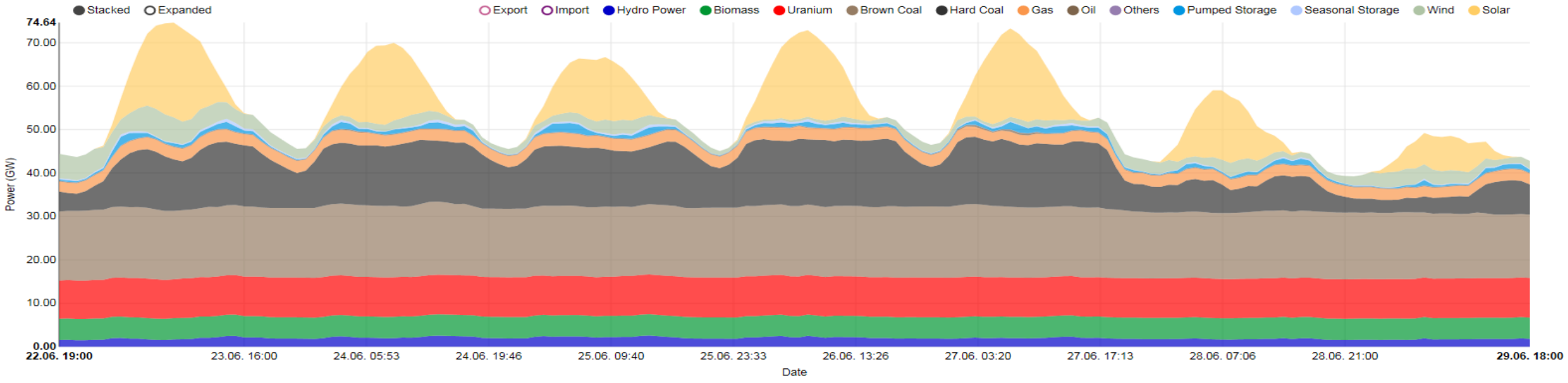
year: 2014

month:

week: 26

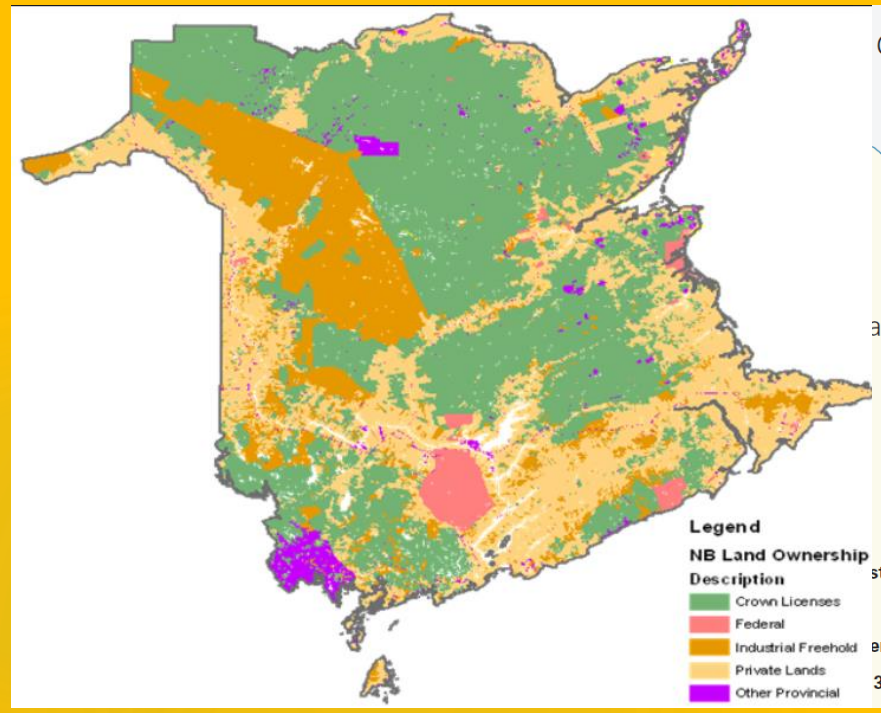
conv. >100MW
all sources
solar + wind

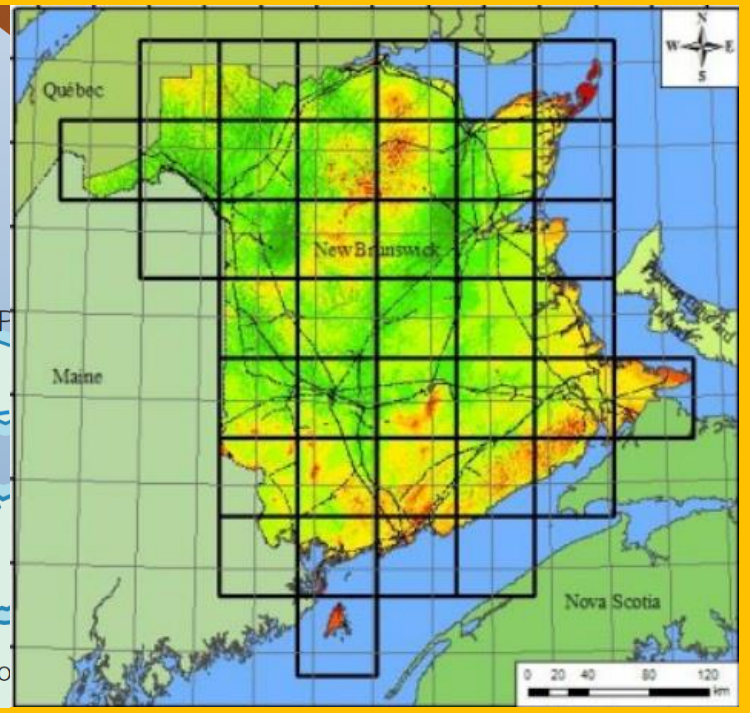
print



Where to put them?

Crown Land





Economics

- Wind PPAs renewed for an additional term at reduced prices (25% reduction of new costs).

c) The average price for the existing wind PPA's currently stands at approximately $84/MWh.

b) Yes, the current average wind PPA electricity rates are lower than the Levelized Cost of Electricity rates assumed in the IRP.

Why use a unrealistic cost of 110/MWh?

NBP (NCFS) **IR-16** **March 27, 2015**

Reference: Exhibit NBP4.04 "IR-10 Response C"

Questions:

a) Is the average PPA price for wind lower than the cost of generating electricity at Coleson Cove?

RESPONSE:

a) For the 2015/16 test year, the budgeted average PPA price for wind is lower than the budgeted cost of generating electricity at Coleson Cove.

Economics

Millions of Dollars of Private investment without going into debt

Call for tenders for the purchase of 450 MW of wind power: Hydro-Québec Distribution accepts 3 bids totaling 446.4 MW

MONTRÉAL, Dec. 16, 2014 /CNW Telbec/ - Hydro-Québec Distribution announces that it has accepted 3 bids totaling 446.4 MW in response to the call for tenders issued on December 18, 2013, for the purchase of a block of 450 MW of wind power generated in Québec.

Deliveries of electricity must start December 1, 2016 and December 1, 2017. The average price of the accepted bids is 7.6 ¢/kWh, including 1.3 ¢/kWh for transmission costs.

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Home > Power > Report: Wind power to create 4,200 jobs in Maine in 2015

Report: Wind power to create 4,200 jobs in Maine in 2015

January 8, 2015

PORTLAND, Maine (AP) — Maine's wind power industry is poised to double its energy output over the next four years and is projected to create more than 4,000 jobs in the state this year, according to a report released Tuesday.

Can we burn less coal?

NBP (NCFS) **IR-14** **March 27, 2015**

Reference: Exhibit NBP4.04 "IR-5 Question C"

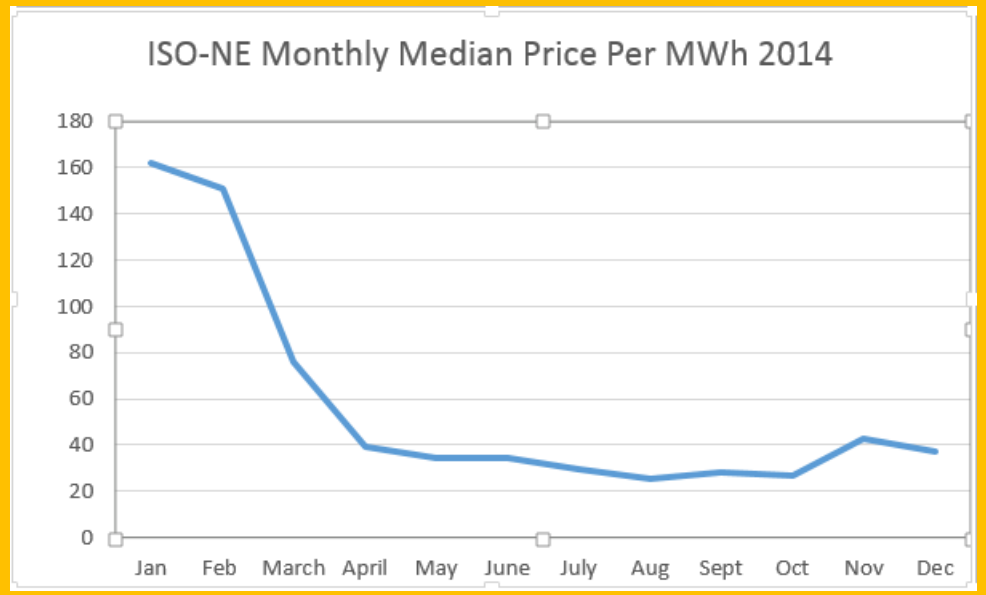
Questions:

a) Is it possible, and if so to what extent could hydro power from Quebec be used to either reduce or replace power generated from Belledune in the non-winter months?

RESPONSE:

a) Yes, subject to operating constraints and economic conditions, it is possible to reduce Belledune production in non-winter months with purchases from Quebec. It is standard practice throughout the year for NB Power to displace in-province generation whenever it is more cost effective to purchase energy.

The Belledune Generating Station supplies power, energy and ancillary services including load following, reactive power and voltage control throughout the year. While an energy supply from Quebec may displace Belledune production, Belledune must still maintain a minimum level of production in order to be available for ancillary services and hourly and daily load variations throughout the year. Occasionally, during non-winter months, Belledune is shut down for planned maintenance and could be entirely replaced with energy purchases from Quebec if transmission capacity is available and a supply agreement is in place.



What happens when the wind doesn't blow?

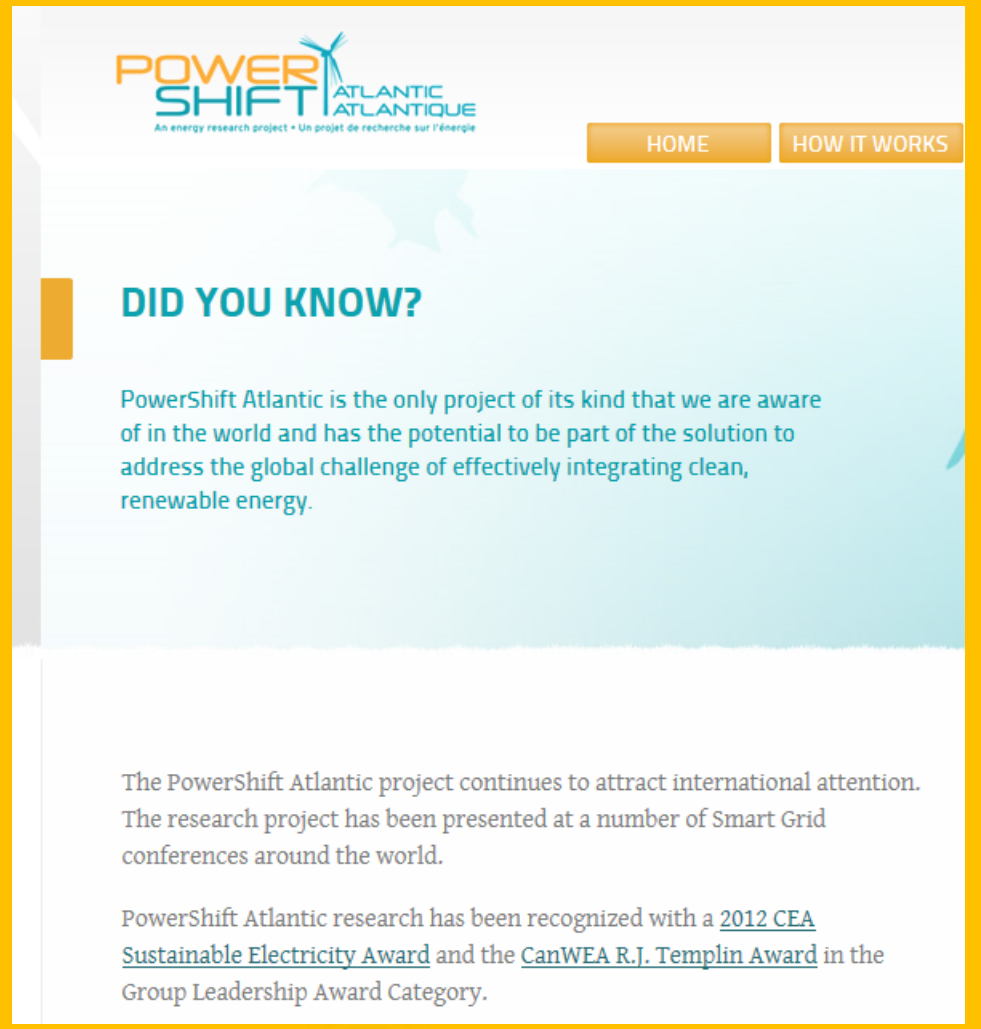
President of HQ
Terry Vandal

We can store a lot of power, in fact more power than the state of New York consumes in an entire year, and we have 40,000 MW of capacity to produce energy on demand for our customers. So we're natural partners for the long term. People are going to expect more of their power to be renewable in the future.

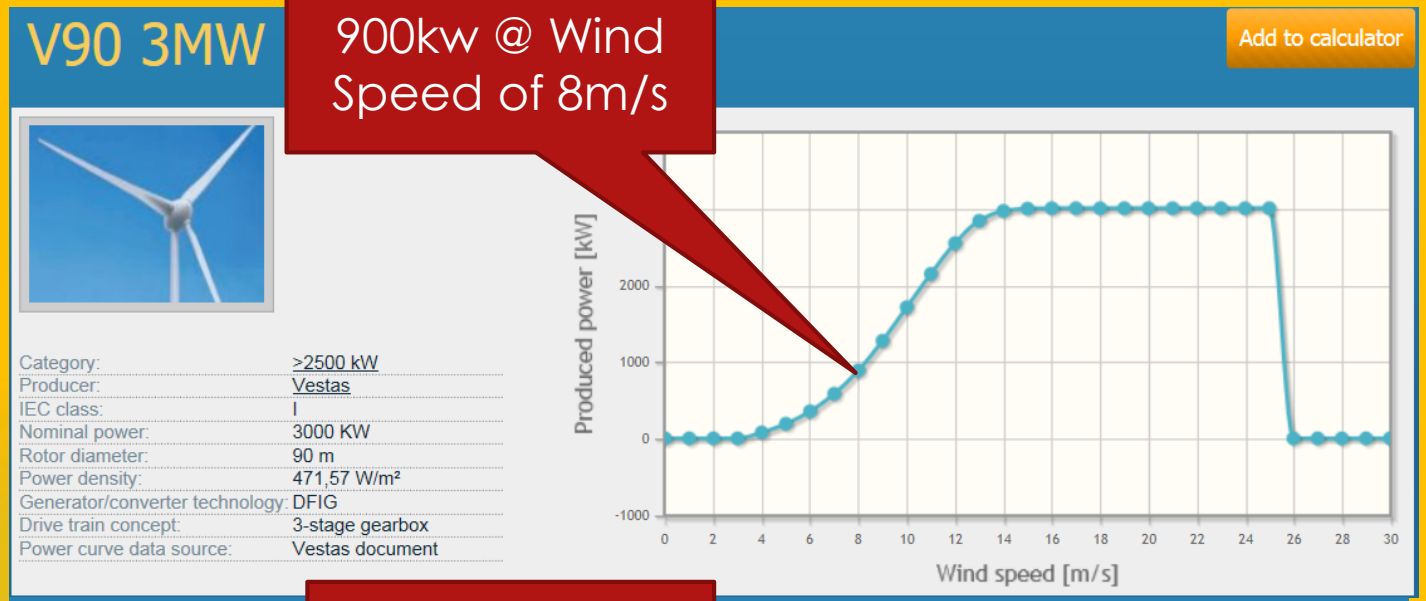
Quebec finds itself with an estimated surplus of more than 30 terawatt hours – enough to meet the annual electricity consumption of 45% of its households. New production

Power Shift Atlantic

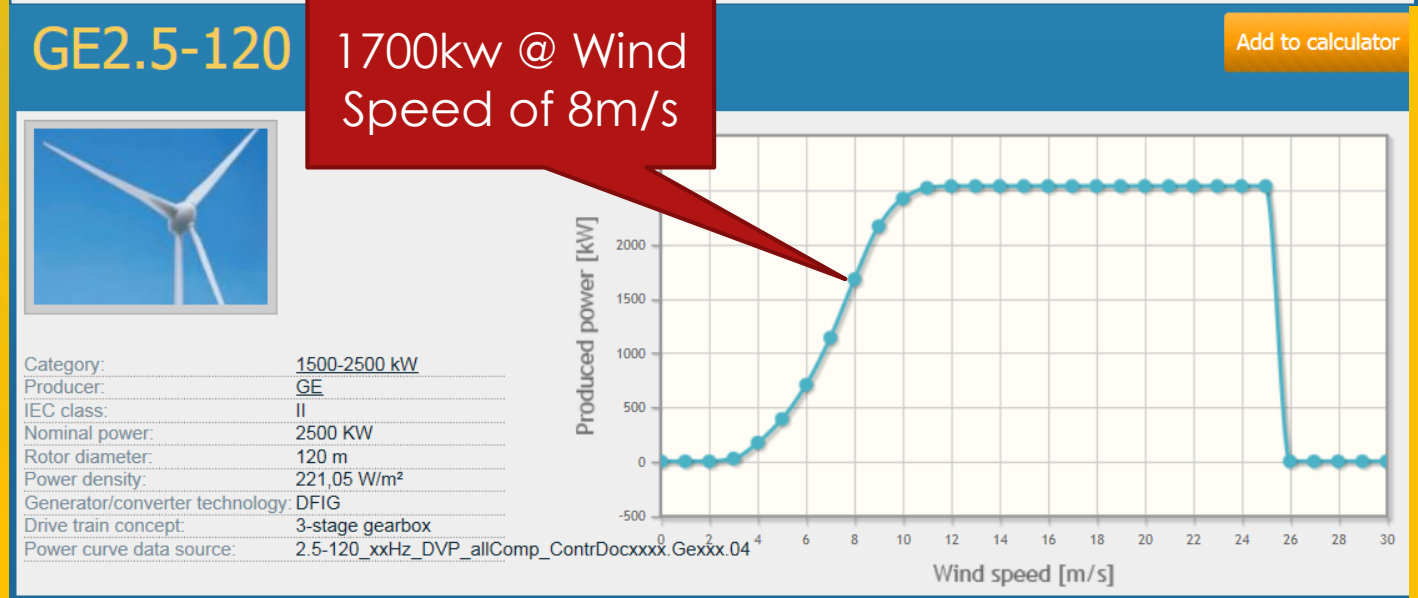
Do what we are good at!!!!



Advances In Wind Power



Kent Hills Wind Turbine



Modern Wind Turbine